

# SEQUENCE LISTING

<110> YE, Jane et al.

<120> ISOLATED HUMAN PROTEASE PROTEINS,  
NUCLEIC ACID MOLECULES ENCODING HUMAN PROTEASE PROTEINS, AND  
USES THEREOF

<130> CL001058DIV

<140> (to be assigned)

<141> 2001-12-14

<150> 09/740,035

<151> 2000-12-20

<160> 4

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 1247

<212> DNA

<213> Homo sapiens

<400> 1

```

gccatggtgg ggcagaggtt gggaagatgg cgtggcgagg ctgggcgag agaggctggg 60
gctgcggcca ggcgtggggt gcgtcgggtg gcggccgcag ctgcgaggag ctactgcgg 120
tcctaaccce gccgcagctc ctccgacgca ggtttaactt ctttattcaa caaaaatgcg 180
gattcagaaa agcaccaggg aaggttgaac ctcaagatc agaccagggg acaagtgggtg 240
aagcatacaa gagaagtgtt ttgattcctc ctgtggaaga aacagtcttt tctccttctc 300
cctatcctat aaggagtctc ataaaacctt ttttttttac tgttgggttt acaggctgtg 360
catttggtat agctgtctat tggcaatatg aatcactgaa atccagggtc cagagttatt 420
ttgatgggat aaaagctgat tgggttgata gcataagacc acaaaaagaa ggagacttca 480
gaaaggagat taacaagtgg tgggaataacc taagtgtatg ccagcggact gtgacaggta 540
ttatagctgc aaatgtcctt gtattctgtt tatggagagt accttctctg cagcggacaa 600
tgatcagata ttccacatcg aatccagcct caagtgttat ttccaatttt gtcagttacg 660
tgggtaaagt tgccacagga agatatggac catcacttgg tgcactctgt gccatcatga 720
cagtcctcgc agctgtctgc actaagatcc cagaaggagg gcttgccatt attttccttc 780
cgatgttcac gtccacagca gggaatgccc tgaaagccat tatcgccatg gatacagcag 840
gaatgatcct gggatggaaa ttttttgatc atgcggcaca tcttggggga gctctttttg 900
gaatatggta tgtaacttac ggtcatgaac tgatttgaa gaacaggagg ccgctagtga 960
aaatctggca tgaaataagg actaatggcc caaaaaaagg aggtggctct aagtaaaact 1020
gggattggac agtagtggtg catctggtcc ttgccgctg agagccccag gagacatcgg 1080
ctagagtgc catggctatg ctcccgtctg gaagatgcca gcatctggcc tcccactgtt 1140
ttcagctgtg tccccagtc cgtgtctttt tagaatgtga atgatgataa agttgtgaaa 1200
taaaggtttc tatctagttt gtaaaaaaaaa aaaaaaaaaa aaaaaaa 1247

```

<210> 2

<211> 329

<212> PRT

<213> Homo sapiens

<400> 2

```

Met Ala Trp Arg Gly Trp Ala Gln Arg Gly Trp Gly Cys Gly Gln Ala
  1              5              10              15

```

Trp Gly Ala Ser Val Gly Gly Arg Ser Cys Glu Glu Leu Thr Ala Val  
 20 25 30  
 Leu Thr Pro Pro Gln Leu Leu Gly Arg Arg Phe Asn Phe Phe Ile Gln  
 35 40 45  
 Gln Lys Cys Gly Phe Arg Lys Ala Pro Arg Lys Val Glu Pro Arg Arg  
 50 55 60  
 Ser Asp Pro Gly Thr Ser Gly Glu Ala Tyr Lys Arg Ser Ala Leu Ile  
 65 70 75 80  
 Pro Pro Val Glu Glu Thr Val Phe Tyr Pro Ser Pro Tyr Pro Ile Arg  
 85 90 95  
 Ser Leu Ile Lys Pro Leu Phe Phe Thr Val Gly Phe Thr Gly Cys Ala  
 100 105 110  
 Phe Gly Ser Ala Ala Ile Trp Gln Tyr Glu Ser Leu Lys Ser Arg Val  
 115 120 125  
 Gln Ser Tyr Phe Asp Gly Ile Lys Ala Asp Trp Leu Asp Ser Ile Arg  
 130 135 140  
 Pro Gln Lys Glu Gly Asp Phe Arg Lys Glu Ile Asn Lys Trp Trp Asn  
 145 150 155 160  
 Asn Leu Ser Asp Gly Gln Arg Thr Val Thr Gly Ile Ile Ala Ala Asn  
 165 170 175  
 Val Leu Val Phe Cys Leu Trp Arg Val Pro Ser Leu Gln Arg Thr Met  
 180 185 190  
 Ile Arg Tyr Phe Thr Ser Asn Pro Ala Ser Ser Val Ile Ser Asn Phe  
 195 200 205  
 Val Ser Tyr Val Gly Lys Val Ala Thr Gly Arg Tyr Gly Pro Ser Leu  
 210 215 220  
 Gly Ala Ser Gly Ala Ile Met Thr Val Leu Ala Val Cys Thr Lys  
 225 230 235 240  
 Ile Pro Glu Gly Arg Leu Ala Ile Ile Phe Leu Pro Met Phe Thr Phe  
 245 250 255  
 Thr Ala Gly Asn Ala Leu Lys Ala Ile Ile Ala Met Asp Thr Ala Gly  
 260 265 270  
 Met Ile Leu Gly Trp Lys Phe Phe Asp His Ala Ala His Leu Gly Gly  
 275 280 285  
 Ala Leu Phe Gly Ile Trp Tyr Val Thr Tyr Gly His Glu Leu Ile Trp  
 290 295 300  
 Lys Asn Arg Glu Pro Leu Val Lys Ile Trp His Glu Ile Arg Thr Asn  
 305 310 315 320  
 Gly Pro Lys Lys Gly Gly Ser Lys  
 325

<210> 3  
 <211> 19736  
 <212> DNA  
 <213> Homo sapiens

<400> 3  
 cgagggtttct tcatgttggt caggctgggc tcgaactccc gacctcaggt gatccgtccg 60  
 cctcagcctc ccaaagtact gctgggatta cagacgtgag ccaccgcacc cggcctttat 120  
 ctttcatttt ttttcattga ttttccttta ttttaatcac tttatccaga aacatatcct 180  
 cgtcttgaca gtgctgtggt gcctgtggtt tccagaagct ggggtgtgctg tgtgtctgtg 240  
 gtttgaggaa gttgcccatg gaactgacag aggaagcaga gtagtcgttg ccatttttca 300  
 gcctagtagg caggatcagg gaccccatct tgctctcttt gccttgaacc acaattagaa 360  
 taaaacacca aagccctgac tgatcatgat catagcaatc cgatctttat gatcatggcc 420  
 agaccattct caggctgtct ttaccctaag atatcaatca ctgggtatga caacctagac 480  
 ctaagggtgc actctgggta gtaaagatga ttaactctcc caaaggaatc taaggaatcc 540

agagcaacac	gaatcactgc	tctcttccta	tagggtaaac	ctcccaagac	tccagtcctt	600
gtgaggaggc	tctgcccgc	tgcccttccc	aggggtccag	gctccacatt	gggagggtga	660
cacagtgtc	tctgctcttc	attgccttgt	gtatgatccc	ttttcccatc	tttgcataaa	720
tgctgtccct	ctcaccatct	ttaaaagagt	tctgggtaat	tattttaccaa	aggtggtata	780
atgctgtcac	agtccctgct	agtgaacat	ctgatacaac	tgatggaatc	agttcaacaa	840
aatgcagtaa	aatttttatt	aatgtactac	ggagaaagaa	aaaatgctac	cagttataag	900
atgcatcctg	atttcagata	ttaaaatgga	aaaaatgtct	taagatctgt	gaaaaatgta	960
gcttcctttc	ccacctctca	agtgggagag	caaaaactgg	acagactaga	aatgccaggg	1020
gctagctgag	aaccttacag	aatgagcaac	tgcggaagcc	acaggtaaca	ccgagatgta	1080
gatcagctgc	cagggacaag	acaaagaatg	ttttctaaag	taaatcctct	taccagtatg	1140
ttattgaaat	cagtccttat	tggcatcgaa	gaagggtgaaa	gtgctacttg	cctgttgccct	1200
acagagactg	gaggaatgac	aaatgtttta	attattttta	ttcaacaagt	agaggaatac	1260
ctgctatgtg	aaggagttgt	ggcaattcat	aaaattaata	tattttttga	agttttagt	1320
tttcaataat	aatttcttat	ctaaaatgta	acaagttaat	tatattatcg	aataaacctc	1380
aatttcgtag	tactaacaac	atcaacactt	acagaaaaag	gaaagtcact	caactcccac	1440
atgtaaacag	actttagaag	cagttgcaga	ggttttctaa	attatccctg	aattcctatc	1500
acatgactat	ttttctcaga	catgttgacc	ttcacctaca	cagatgactc	acatatgttt	1560
ccataagctg	gcagtaagtt	taagaagcat	accatgccct	gaggaaaaag	aagtaatgtt	1620
agctcttcta	ctcttgcca	aagaacctaa	ttctgtatat	tacttctgtc	tttggtttgg	1680
ctattataga	caataaatta	ttgatctgat	tataattgag	aaaagtaagc	tcttctaaag	1740
aagtaaaata	tgatctagg	gaaaggaagt	tagctccag	agcatttaca	atttcccagg	1800
aattctgtga	ctttaccaac	cctaggcagt	gctgatactt	taaaagcatt	catttcactt	1860
gctttttttt	ggctcacc	ctatcccca	ggtatacagt	actcttacat	aattgtggaa	1920
gaatcttaca	agggggtaat	gtagatcaga	ctttcctgct	ttcattttta	acctccctaa	1980
attataaata	tttattttgt	aggtattata	gotgcaaagt	tccttgatt	ctgtttatgg	2040
agagtacctt	ctctgcagcg	gacaatgatc	agatatttca	catcgaatcc	agcctcaagt	2100
aagtctaact	tgtgtgaatt	tattttaagg	tagaaataat	atgaaagaaa	tatgctttag	2160
ttaatggaag	tgtgttaaaa	aagacgaatt	acctatcaat	agctacaagc	aaaatgcaga	2220
ggataggctg	taagctcctt	cactgaggac	agggacctca	cctctctttt	tctttttctt	2280
tggttttttt	gagacggagt	cttcctctgt	tgcccaggct	ggagtgcagt	ggtgcagtct	2340
tagctcacta	caacctccac	ctcccagggt	caagtgattc	tcctgcctca	gcctccctag	2400
tagctaggat	tacaggtgcc	cgccaccaca	cccagctagt	ttttgtattt	ttaatagaga	2460
caggggttca	ccgtgttgga	taggctgttc	ttgaacacct	gacctcagg	gatctgcctg	2520
gctcggctgg	agtgcagtgg	cgtgatctca	gctcactgca	agctccgcct	cccgggttca	2580
tgccattctc	ctgcctcagc	ctcctgagta	gctgggacta	caggtgcccg	ccaccacgcc	2640
ccgctaattt	ttttgtattt	ttagtagaga	cgggggttca	acatgttagc	caggatggtc	2700
tcgatctcct	gacctcgtga	tccgcccgc	tcagcctccc	aaagtgcctg	gattataggc	2760
gtgagccaact	gcgcccggcc	aatttacttt	ttattttatt	ttattttatt	ttttgagaca	2820
gggtcttgct	ctgttgccca	ggctagagt	cagtgcacg	atcttggtc	actgcaacct	2880
ctgcttctca	ggctcaactg	atcctccac	ctcagcccc	aggagctggg	actacagggt	2940
catgccacca	tgcccagcta	attttttttg	tttttagtgc	agatgaggtc	ttgccatgtt	3000
gccagactg	cttatttttt	tctaataaac	ttttgccata	aggacaagt	gctttcattg	3060
aactgagagt	ttttattggt	tgcttactaa	gtagaaaaga	atattttatta	agacagcttt	3120
ttgtcacttt	taaaaatgat	gtcttaagct	gggcatagt	actcacatct	ataatcccag	3180
cacttgggga	ggctgaggca	ggtgaactgc	ttgagctcag	gagttcgaga	ccagcctggg	3240
aaacatggtg	aaaccccatc	tctactaaaa	atacaaaaat	tagttgggca	tgggggtatgt	3300
acctgtggtc	ccagctactc	agggaggtg	aggtgggagg	atcacttgag	cccttgagcc	3360
tcaacttgag	gaagttgagg	ctgcagtgag	ccaagatcag	tgccactgca	ctccagcctg	3420
gggcgacaga	gcaagactct	ctccaaaaaa	aaaaaaaagt	cttaaaaaata	gctgtttttg	3480
ttttccatgt	ttgtttcata	aatttttttt	tttttttttt	ttttgagata	gagtctcgct	3540
ctatggccca	ggctggagtg	cagtggctca	atcttggtc	actgcaaaact	ctacctctg	3600
ggtccaagt	attctccgc	ctcagccttc	cgagtgcag	gaattacaaa	cgtgcgccac	3660
cacacctggc	taatttttat	atttttaata	gagatgggt	ttgactatgt	tggccaggct	3720
ggtcttgaa	tcctgactta	gtgatccgcc	tgccctggcc	tcccaaagt	ctgggattac	3780
aggcgtgagc	cactgcgtcc	ggcctaattt	taaaagttaa	aatggataa	tttttattgg	3840
ctgtgtgttt	catgattacc	agactatgtt	tctctctctt	gtagaggctc	tttggtctcc	3900
aatgttgctg	tcaacattca	gtcatttctc	cttattttcac	atggcagcaa	atatgtatgt	3960

tttgtggagc	ttctcttcca	gcatagtgaa	cattctgggt	caagagcagt	tcatggcagt	4020
gtacctatct	gcaggtaata	tgctttaatc	tcggggcctt	tgagagtata	agcactctaa	4080
gctatctgca	gaacggacaa	agggaaatgat	tactgccata	ttctacacgt	agtgagtgt	4140
cagaacatat	ttgtttctca	cagtgtatgt	agagaaggga	gccacagatt	ggtggagatg	4200
ttgccttttc	tgttcatttt	gctgatttct	tcttacatat	gaattatgtg	ggtatgttta	4260
attttaagtt	aggataaaca	ggcgttaagt	aagggttagt	gtagaattta	agcatgtcat	4320
ttttgtaatc	tcacggggcc	ttgatttcat	tagtttaggc	cctccatttt	atagatagtg	4380
gttcccagac	ttcccggctg	cctcaatctc	ctgggtcttt	gttaaataac	cttaagcaag	4440
ctcatttccc	ccagtgtgtt	cagttcacag	aaagctttta	atcagagcta	tacaatatga	4500
ttgtcaagag	tgagtttgtt	ctgtcttctt	tgcaagaatg	tagcaggga	ccacttccta	4560
gccatggtct	tgaagatggt	atcgtttctt	atttcagtta	ggaaattctc	atgcatgaat	4620
ccaggctccct	agatgctgct	aacgtgacag	ttggtcaaat	tttacttacc	tctctgtttg	4680
taaaatgtac	ttacttaata	caatataaaa	attaatttct	aaaatctcta	catttagaaa	4740
cagtatatct	ggcagttgtg	ctgtgatgta	gtgaaaaaca	ctaagcttgg	cgatagacc	4800
aggttcagat	cctatttcta	ctaccagctg	agtgatgttg	caaaaatgac	taaacctcat	4860
gatacttacc	tcctcatgac	aaggggttaa	agaaaggact	acataaaaagc	atctaccaca	4920
agccccagag	tagatgctta	attagtgttc	atcgaatact	tatgtgtatc	tagtccttca	4980
aaaaaagaag	ctgagcattg	tgtttggtt	gtaagataag	tgtatagttc	tttcccaagc	5040
actagttatg	ttgtagttac	agaggtctg	tttcagatac	attaattcct	gctccatagg	5100
agggtttttaa	aaatgagcca	cgttgactca	aatggcactg	aagccaaaga	gacttacggg	5160
atcatccagt	ctgttgtccc	accccagata	ttctgatttc	gtgtgtctgg	agtacagcca	5220
gagaatatac	tcttggaat	gagtcctcat	gttatagttg	aggaaaatgg	taactgagaa	5280
gtggagtga	tgaccgtgtc	gctcagcaga	tcatgcagca	ggtcagactt	ttcatccct	5340
gtaaagtcgc	tgaatgata	ggcaggagaa	gtattcatgc	ccgtaccctc	acagtgatcc	5400
agattgaaac	ccgacactgt	ttatctgtgt	agaaatcaga	aatgaaaacc	attttcatgg	5460
ctggatgtgg	tgccgcacgc	ctgtaatccc	agctactcag	gaggctgggg	gacaagaata	5520
acttgaaccc	ggtaggcaga	ggttgcatg	agccaaaatt	gtaccactgc	acttcagcag	5580
ccggggcgaa	agagtgaac	tctgtctcaa	aaaaaaaaaa	aaagaaaaga	aaaaaaaaag	5640
taaaccattt	ttatacctca	cttaaatatt	tgtaatgtga	cttgtttttc	agggtgtatt	5700
tccaattttg	tcagttacgt	gggtaaagtt	gccacaggaa	gatattggacc	atcacttggg	5760
gcagtaagta	tttctattgt	aaattttttt	taatttaatt	tttaaattta	ctttgaaata	5820
agtttagact	tagaagaatg	ttgtaaaatt	gataagtagg	ttctcatata	cccttcaccc	5880
tactgttaac	taacatcgaa	accaagaaat	taacattgaa	acaatacagt	tgactaattt	5940
agaatttata	catttgtaaa	gctttgtaaa	tgccgggcta	tagcttttaa	ccattggtca	6000
tatatatatg	tttaccagag	cagagtatat	ctcagaacag	taagtgtgca	atcctcgtaa	6060
accagagagc	ctaataccagt	attggaagat	tctaattata	gatttgaatc	tggtacttta	6120
tectcctatt	tagtcaatat	tggagtgcct	actaggtgct	atgctagagc	ctggggataa	6180
cagctggtga	gcaagatgat	cacgattatt	tgtgttggtt	ttagaaagtg	gggaacaaca	6240
acaacaaaaa	aggctcctgc	cctcagagct	cttatattct	ggatgcttaa	aaaaattttt	6300
cttaggctgg	atgcagtggt	ttacacctgt	aatcccagca	ctttgggagg	ccaaggtgag	6360
aggatgagcc	caagaattcg	aaaccagccc	tggtaacata	ccaagatcct	atctgtacaa	6420
aaaaatttaa	aaaatttaact	gggggtggtg	gcttatgccg	gtagtctcag	ctactcagga	6480
ggctgaggaa	ggaggatagc	ttgagcctag	gaggttgagg	ctgcggtgag	ctgtgattgt	6540
accactgcac	cccagcctgg	gtgacatagc	aagaccctat	ctcaaaaaaa	aaattttttt	6600
ttaagtgtgt	tttgaggctg	ggtgcagtgg	ctcacacctg	taatcccagc	actttgggag	6660
gctgaggtgg	gcagctcact	tgaggtcagg	agttcaagac	cagcctgggtc	aacatggtga	6720
aaccctgtcc	ctcctgaaaa	tacaataatt	agccaggtgt	ggttgtgcat	gcttgtaatc	6780
ccagctactc	gggaggtgta	ggcaggagaa	ttacttgaac	ccagcgggta	gaggttgtag	6840
tgagctgaga	ttgcaccact	gcactccagc	ctgggtgaca	gaacaagacc	ctgtctcaca	6900
gaacaagacc	ctgtctcaaa	gaaaaaaaat	ttttttaagt	gtcttttgag	tttaatggca	6960
gatttctggg	cacatggaaa	tctttatgta	atatttcctt	acacattcag	tttgacttta	7020
tttaaatact	aattcattta	aatgcattca	aatagggaat	ttcctattta	aaggaaactct	7080
aaaaaggtca	attttgaaaa	gaatttctta	gtaaaaaac	cattccctaa	tttgatgtgt	7140
cccaaatttt	gtttacactt	aattttccta	gtgaggcctg	tgttctgtcc	tgtgaccaca	7200
tgctttctta	agcctccttt	tttcccttcg	tggaaatgtt	attttcttta	tacaatttcg	7260
ctctgatata	atttatatat	ttcgaatcat	attgtctacc	tcattcaaca	gctaagcacc	7320
taatatatga	aggcagtgaa	gaccactagg	atgaatcaga	gactcagaat	tcgaatttag	7380

ctgggggagaa	aacatgcaca	catctaatac	acactgaaag	gaatgaggat	tctctagagg	7440
acttttggggg	ctctaagagt	gaagagacct	ttctaattag	ctgaaaggac	ctgcgagggc	7500
attttgatgt	gctcttggac	agctgttgtc	ctcatcttat	agataagaaa	ctgaagtgca	7560
aacttaatga	agtatggcag	taaggtat	ggagttagag	tgggggtgaa	tcctggttct	7620
gctacttacg	tgtgatttct	aggacatatt	actgaacttc	tctgaatttc	agtttccctt	7680
tataaaatgg	ggataacacc	atctatttct	gaggtgcaaa	gcaagtacat	ttagagtgtc	7740
tagcacaata	agaagcacat	ggtaagaaat	gtggacatgg	tagttcctgt	tcagtcacat	7800
aaatcctaca	gcgccgtggt	aggataacat	tatccccaaa	tatcttaatg	aatctgtgat	7860
taaaattcaa	ggaaattaaa	tcaccaggta	taatggcatt	tttaatgaga	aatctgggaa	7920
aaaaacacca	ttaacaaagt	tgtgttgta	caaaatgtaa	agcgttagtc	ctcttgggtt	7980
agtgagacgt	tataagatgc	aggggacagc	caggcacagt	ggctcacgcc	tgtaggccca	8040
acactttggg	agccacggca	ggaagatcac	ttgagcccag	gaggtttgag	actagcctgg	8100
gcaacaaagt	gagaccccat	ctctacaaaa	aatttcacaaa	ttaagccggg	catggtggca	8160
tgcacctgta	atcctaccta	ctcaggagag	gtgggagggg	gggaggaatg	cctgagccta	8220
ggaggggtgag	gctgctgtga	gccatgagca	tgccactgtg	ctccaacctg	gacaacatag	8280
cgagacccca	tctcaaaaaa	aaaaaaagaa	agttgaatgg	gactgttaaa	atatgtttgt	8340
aaattactgt	attggtacta	tcctggataa	tttttaaaact	tttctgtaga	gacagggctc	8400
ccctatgttg	ccaaggctgg	tctcaaactc	ctgggctcaa	gtgatcctcc	tacctgggccc	8460
tcccaaagtg	ttgggattac	tggtgtgagc	cactacaccc	ggccaattgt	cttttcttat	8520
tcaagttgag	atttttctgg	ttcttgatat	gatgagtgat	ttttcagttg	aagcctgatc	8580
attttagata	tgatgagact	ttggatctta	ttgaaatctg	ctgtttcagt	ggtcttcctc	8640
tgacactggt	ctgatgagga	gagggggtgc	cgtgactcgt	tactgctggg	tgtaggagta	8700
gacgtccagg	ttcctcactc	agccgccttt	gcctcctgag	tgataggggc	tcttgtcact	8760
gcagggcagg	gatgggagct	gagggcgctgc	aggctaccta	gtgtgcctct	gctaagtgcg	8820
ctgtggctag	gaggagcaag	ggtgcttctt	tccgctgaca	ccgctgtta	ggcgtattgg	8880
gatgcctcat	tacagtgtgg	caagggtggg	agtctaggct	ctgctcagcc	tttgctgggc	8940
acccgtttct	ctaaatattg	tctaaaaggt	ctcttttgct	aggctatctt	tttttgggtc	9000
ttgactagag	agaacatggt	gagggatgat	cgatatgagg	ccaaaagaaa	gcccagggaa	9060
ctcaccacca	caacattgat	tgaatctcag	gcttcctagc	tgggtccgctt	tcctctctct	9120
tcctttcaca	gtcctcttac	atttgtttca	tatgtaacac	ccagggtctt	tagctgtact	9180
tagcttttgt	aagcagaggg	agcagattca	cttaaatat	aataccaaat	aaagttaaaa	9240
aacataagta	tgatagattt	gaagattata	tagatacaga	aaaatgtttg	tgagcccagg	9300
cgcagtggct	cacaactgta	atcccagcac	tttgggaggg	cgaggtgggt	ggatcacttg	9360
aggccaggag	ttcgaaacca	gcctggccaa	catggtggaa	ccccatctct	actaaaaata	9420
caaaaattag	ctgggcatgg	tggtgtgtac	ctgttagtcc	cagctacttg	gcaggctgag	9480
gtgtgagaat	taacttgaac	ctgggaggcg	gaggttgacg	tgagatcgtg	ccaccgcact	9540
ccagtttggg	caatagcgag	actctgtctc	aaaaaatata	tgtttatgaa	ataagtaaaa	9600
aaaaatcaga	tgtgcatatt	gattacaggt	atataaccag	tacataaaaa	tattgatgga	9660
gaacaaaaga	ccttcacctc	ttcccatgga	cccacacctc	ttaggtctgt	tggatcaggg	9720
ttcatgactc	actgtactta	aactgtgtat	gaatgtgagc	gttttctgag	aagagaaggg	9780
ttcattttca	ttaaattctt	ctttctgact	cgaaaaagtg	aaaaaagtct	ctctgcatgg	9840
gagtaagccc	aaatatttgt	caaaaaacaa	gttgtgattt	attcagacat	ataaatattt	9900
aaatttatat	aaaagccaca	tcgagaaaaa	tctagaagga	tgatggaact	gtgtatgtaa	9960
taattacaat	aagtataat	cacaaaaaaa	ccagcgttcc	atggaattgt	acagataacg	10020
acaatttttt	ttaacagatg	gagaataatc	atctatggaa	tagtagttta	gaagaacttc	10080
atagaatttt	tttttttttt	tttttttttt	ttttttggag	agggagtttc	gttcttgttg	10140
cccaggctgg	agtgcaaagg	tgcatctctg	gctcgctaca	acctctgcct	cccgggttca	10200
agcgattctc	ctgcctcaac	ctcctgagta	gctgggatta	caggcatgca	ccaccatgcc	10260
cagctaattt	tgtattttta	gcagagactg	ggtttcttca	tgttggtcag	gctggctctg	10320
aactccagac	ctcaggtgat	ctgcccgcct	cagcctccca	aagtcctggg	attacaggtg	10380
taagcgactg	tgcttgccag	aacttcatag	aattttaatg	ctcttttata	tcaactaatc	10440
aaatttatatt	tgcttcattt	tggggaaacg	tgtaattttg	atttgttttg	gggttttttt	10500
gagataaagt	gtcactctgt	cgcccaggct	ggagtacagt	ggctcaatct	tggctcacca	10560
caacctcagc	cttccgagta	gctgggacta	caggcgccca	ccaccacgtc	tggctaattt	10620
ttgtgttttt	agtagagacg	gggtttcact	atgttggeta	ggctggctct	gaactcctga	10680
cctcaggtga	tccacctgcc	tcggcccctc	agagtgtcgg	gattacaggc	gtgagccacc	10740
gtgcccggct	acaattatag	tctcttgcac	agaagccagc	ttggtcacaa	ttcaggtctt	10800

cttgggtcct	ccttttgagg	agtgttcagt	ctgtccctcc	atcttgagct	tacctgact	10860
tctaagaatg	caaccgagc	ttgtttccct	gttgaggcca	cttggcagtt	atatgaggga	10920
ctggggacat	ctgagatctc	tgggactcat	aataattttc	tttaaagttt	tagtaattcc	10980
ccaaatgtaa	gataatcttg	tattctgaag	caaccgtca	catagaagac	attaagaaaa	11040
cattgattaa	gagaggtaga	tgctattttc	cagaaacaac	cgtttttata	tgaaaaggta	11100
ggaacctttc	tttttaata	taggggcttc	tttcaaaagt	tattttgctc	ttaggtgtct	11160
tttttttttt	tttaaaccatc	tcattcataa	ataattaaaa	acttatggga	aagttgcagg	11220
gaatagtaca	gaggactccc	ataaagtctt	ttttgtttgt	ttgttttggt	ttgttttgag	11280
acagagtctc	gctgtttttac	ccaggctgga	gtgcagtggg	acaatctcgg	ctcactgcaa	11340
cctctgcctc	ccgggttcaa	gcaattctcg	ggccttagca	tcctaagtag	gtgggattat	11400
aagcatccgc	caccacgccc	agctaatttt	tttttttttt	tttttttttg	tatttttagt	11460
agagcgggg	ttttaccacg	ttggtcaggc	tgggtctcaa	ctcctgacct	cagggtgatcc	11520
acctgcctcg	gcctccaaaa	gtgctgggat	tataggcgag	agccactgca	cccagcccca	11580
tgtagtcttt	ttaaaaagca	ggcaactcag	gtttactagt	taacatgcaa	aaaactgcac	11640
atattttaag	tttggttaagc	tttgacatgt	agacaccctg	gaaaccatca	ccacactcaa	11700
gatcatggac	atattcatcc	caaaagcttc	ctagtgggtc	ctccttctct	cccctcctct	11760
acctctggcg	acaacttacc	tacttctact	aaagataaat	tagtttgcaa	atggaaccat	11820
acagcatata	ctagtattttg	ttgtcctggc	ctcatttact	ctgtataatt	actttgagac	11880
tcacccatgt	tctgtgtatc	agttttattcc	tttattattt	ttgagacagg	gtcttactct	11940
gttgcctcag	caggagtgc	gtgggtgcaat	catagctcac	tgtaaccttg	acctcctggg	12000
cttaagggat	cctcatgcct	cacaatgtgc	tgggaattaca	ggcgtgagcc	accacactgg	12060
caatgttttg	tttctttatg	aagatgaata	aagatttcac	atgaattttt	taagatgaaa	12120
catgcttcat	gcatgcagggt	ttctttgggc	gtattcatgc	ccactccctc	tggttgagac	12180
tttgtcagag	aagtgtgagc	agttctttcc	taggccatag	gtgaaagatg	cgcatgacac	12240
gcttagcact	gtccttgccg	ttcatgaggc	acatacatct	tactgccccg	tagtaaaaaat	12300
tcagtctttc	caagcgatta	ctgtgtgaag	gacattttag	tccttcacct	attattgggg	12360
acataagtaa	ctgaaagctt	tgaagctttg	tgtcacctca	gaaatgtgca	gcatgtaaa	12420
tttctagaaa	atgtgctgct	ctttagacct	tgtagccact	aagcagttgc	atattgagtt	12480
tccattctc	cctgtctgtg	tactttgcag	tctgggtgcca	tcattgacagt	cctcgcagct	12540
gtctgcaacta	agatcccaga	agggaggctt	gccattattt	tccttccgat	gttcacgttc	12600
acagcaggga	atgtaagtat	ttttatgaag	tgcagtgtcg	gggatatgtg	tgatgttttt	12660
atgttgagtg	ggttcttgcc	cttaagttag	aaatgtcagt	gctggagcaa	tcacagttgt	12720
gccgcttggt	tcttgctgcc	tttcaggccc	tgaagccat	tatcgccatg	gatacagcag	12780
gaatgatcct	gggatgaaa	ttttttgatc	atgcggcaca	tcttggggga	gctctttttg	12840
gaatgtaagt	ttgagtgtaa	ttgattgcta	aactgcttcc	ttgggtcatg	cgctcctcct	12900
acccagcct	cacccctacc	ccccatcccc	atggcagaga	cattgaacta	tgcaacggaa	12960
gcagaagcag	gtgggcttgg	gaggggtgagg	aaacctcaac	atggcttgct	ttgggtttac	13020
ccagcataacc	tggctcattg	tagagacagt	ctgtgccttt	accctacgct	taaccttaag	13080
ttgccccaac	tgttggcctg	ttattcccag	ccccctctta	gaagactgca	gcctggcccc	13140
cagtctatgc	tgacatcttc	tttttcccct	tcagactttc	ctgccctcct	ctcccctgcc	13200
tggcgtccca	ccctgctacc	ctgacctctg	tctcgccagt	gctatttaga	catgctgagt	13260
tggcggagcc	attgctctgt	atgactggag	tagaggccgg	tgactgcaaa	ccaatgtgga	13320
ccacttactg	agtaccgcgt	gtatgcaggc	accaagctag	ttcccttatg	ttatactatt	13380
actactccca	ttttactgat	gggaaaactga	ggctcagaca	tcattcttccc	caggccaaac	13440
agctcttcaa	tagcagagca	gagctgtaaa	cccacctcta	taagcccttt	ccacccccac	13500
cacaccatat	ggaattgggt	gctaaactgc	ttccttggtg	cacagcaaat	ggcattgtgg	13560
ttacaagacc	ttccacgtgt	gcttcaaaca	atggggtttt	gcctagacta	gtgcttagta	13620
gtaactgtat	cacggaaaca	cggtcaggac	tcttggcgct	catctgatcg	tgggagaccc	13680
gtcagcatga	gctggatccc	ctcggggcct	gtcttttctt	acataaatgt	tgctttttgc	13740
ccttacttgg	tttttatttt	gttccgcgac	aatggaaaac	ttaatttttt	tttttattaa	13800
aaagaaaaat	ctattctggc	cagggtgcagt	ggctcacgcc	tgtaatccca	gcactttggg	13860
aggccaaggc	aggcgatca	caaggctcagg	agatcgagac	catcctggct	aacacagtga	13920
aaccccgctc	ctactaaaaa	tacaaaaaac	ttagccgggc	gtgggtggcg	gcgcctgtag	13980
tcccagctac	tccggaggct	gaggcaggag	aatggtgtga	accagaagg	cagagcttgc	14040
agtgagccga	gatcacgcca	ctgcaactcca	gcctgggcga	caaagtgaga	ctctgtctca	14100
aaaaaaaaaa	aaagaaaaat	ctattctaa	tgaagcagtt	tttcccagta	ggtggcagaa	14160
ctaaatgcca	ttatgccatt	tataatttta	agtgattaaa	gaggagtagt	atgtagtata	14220

tgcaaggctct	agctctaaca	gcagtgcaagt	ataaatagta	gaaactgacc	tgatattaca	14280
gtatgagaaa	catgaagggg	ttctgttttg	tgagctctaa	atztatcttc	catgtatact	14340
tcaaggctct	tctccccagt	agatttttat	tcatctgaac	tataattagg	tggccttttt	14400
ccattctgaa	aataattgga	tcaaatgcat	tttaaagtc	agggctctgaa	aggtggagga	14460
atcctttctc	tttactgttt	ctaattttaa	ctccttttca	tttactagat	ttcagtcatg	14520
tccagaattc	atccttttcta	aaagctttta	tctagattta	gaaatctaaa	atccttttatt	14580
tatttttttt	tcgttgaagt	gccctgattt	tggttggtgt	aaagactcca	ttagtatcca	14640
cttatacatt	tccctgactt	tgccctcgac	caaaccctac	agtattcaca	ttgtactgtt	14700
gcaataataa	tagctaacat	attaatacac	tgaatatttg	ctgtgtgcct	aagctaagga	14760
tttaattctc	ttaaaatcct	gtgaggtatt	ttattttaca	gaaaaagaaa	ctgcttaaag	14820
aaagtaactt	atccagggtca	cacaagtaac	aattgcagag	ctggagtctc	agatgagggc	14880
tggtctgcgc	tgccgctaca	gaaaagagtg	ccctagaaaat	cggtcatctt	gcatttcccg	14940
attttagttt	agccaaatga	aaaatttcctt	ttggattttat	gagtataatc	agacagtata	15000
cctgtgaaat	taaagtattt	gactctttgc	ttgaaataag	taggttaaaa	agatttgggt	15060
ggccggggcg	agtggctcac	gcctgtaatc	ccagcacttt	gggaggtctga	ggcaagtaga	15120
tcatttgagg	tcaggagttc	gagaccagcc	tgaccaatat	ggggaaacct	cgtctctact	15180
aaaaatacaa	aaattagccg	ggcgtgggtg	tgcatgcctg	taataccagc	tacttggagg	15240
ctgaggcagg	agaatcactt	gaagccagga	ggcagaggtt	acagtgagct	gagatcacgc	15300
cactgcactc	cagcctgggc	aacagagcgc	gactctgtct	aacaacaaaa	aagatttggg	15360
aaaacacttt	attaatgaag	agttcctgac	aaagtgattt	ttttggggag	aatttttata	15420
attgcatttg	aataattagg	tgctcctttt	tctctcattc	taaattcacc	agagacttaa	15480
gcacagagaa	tttttattac	atgcctgtta	attaatgtgt	ataatcagat	tttaactata	15540
tttagtgaat	attaagattc	aggtacaaat	caagcccttt	ataattaaac	atacacattc	15600
agaacatttt	taaaatatta	aaacattaaa	ctgctcttct	caccactctc	aagtcaaata	15660
gcattttttc	agtcaggtgt	ctgggagctc	gatgcaagat	aacaaaatct	ggtctctgcc	15720
tcagggaaca	tgaaatctgt	ttggggaagc	cagagcaaaa	ataaagggtt	taatagcaag	15780
ctctcactaa	ctgcccctgg	aaatccaccc	cacatcctcc	aggaagcctt	tctctacccc	15840
cagtgccctc	aggagcttct	ccaaggcagg	cccttcccag	agcgcagtg	gctccccagc	15900
tcacaggaga	tgctccctac	acgtctgagg	aaagtcacgt	gcctgcagca	caggcttcag	15960
cagcagactc	gggttctagt	ctcagtcctg	tgattcctag	ttgtggaacc	tgagcaggcg	16020
aagttactaa	acctctctgt	gcgtcagcct	cccaggctcg	ttgcttcagg	ccgcagttag	16080
gctgtgtgaa	caggagagtg	gggatgggaa	ctaggtatct	taaagcgggg	cagagtttgg	16140
atgagcgggc	cacccttcgt	atagttagga	ggaagatgac	gggaggcatg	gaagctggga	16200
tagccatcct	gagtcagtg	taattctgac	acttcagaac	atcgagtcag	tctgacctgc	16260
gagtgagctt	tcattgacca	cttagaaact	attagcacct	tggacaaact	actttctttc	16320
agacctggtt	gcttcatgtc	tgcgatggga	aaactgatac	ttaacttgca	gatagtgggtg	16380
aatcaaaagt	agtatatgtg	aagtactcac	acactgcgga	gcattcagcc	atcgtcccat	16440
cctacttcta	cctttttacat	attgtaatat	gaaagctaaa	ccatttctcg	atgtgagtca	16500
gttttaatcg	gctacatagt	gagtggcatt	cgatttttaa	aatgtcaact	tgggatctgt	16560
caccatgcta	cttaccattt	gtatgtcaca	ctgtttgaat	gtcggacctg	gtttgttttt	16620
ctccagatgg	tatgttactt	acggctcatga	actgatttgg	aagaacaggg	agccgctagt	16680
gaaaatctgg	catgaaataa	ggactaatgg	ccccaaaaaa	ggaggtggct	ctaagtaaaa	16740
ctgggattgg	acagtagtgg	tgcatctggt	ccttgccgcc	tgagagcccc	aggagacatc	16800
ggctagagtg	accatggcta	tgctcccgtc	tggaaagatgc	cagcatctgg	cctcccactg	16860
ttttcagctg	tgtccccag	tccgtgtctt	tttagaatgt	gaatgatgat	aaagttgtga	16920
aataaagggt	tctatctagt	ttgtaagcag	atgtgtgtgt	tctctcttta	aggggccgac	16980
acggctctgg	catttttgctt	tggttggtgc	attgacagga	cctggggaga	gtgcacctg	17040
aaaggcctga	tcagaacatg	aaggcgtgtg	ttgcctgtct	ttggaccctc	cagtgcctct	17100
gcttagcctt	cactcttctt	tgccctcccc	tcccctgggt	tggctgcaca	taaaagtcaa	17160
gagtatcccc	tctccagcac	aatctgaaat	aacagctgca	gtattttctc	aatttttcagg	17220
aaaggtagtg	ttttctggca	gtgagtggca	tatacaaaaa	gctattttca	ggttttgctt	17280
tctaggttca	atltgtagat	aaattaagag	gtagaaagaa	gtgatttggg	taaattcaga	17340
cttgaaatct	gagccgaatt	ttatcttctg	tttgaaagtg	ttctaattga	agcgtctcac	17400
tgaaaatagc	agatagtggc	tgctgctgct	acagccctca	ctgttggtgga	attcatgtta	17460
ccctcgtgac	tgagaatgac	atctaggaaa	tgagtttga	gagtatgttc	ttcttgaagt	17520
catttacagg	agaattttta	gtcttttgat	ggcttcaaaa	tggtatacca	agtcttgcag	17580
ctttgtcctg	ggaggatcga	aggccctgat	ttcagcctcc	tgtggccgat	cggactcagg	17640

```

ttgtgtgccg tgggggatgg gaatggcgcc tttggaaaag gagtgggagt ggtgcccacc 17700
tcaccaggca agtgagaact gcatggcagc acgcgcccag cacatagaaa ttgtccagta 17760
tttggcagtc cttcatatcc ttcttccatc aggcctggact tgtttctact atgatttaca 17820
gttattcttc ccaggcacag gattctgttc taaactcgta tcacttctag gggagagagt 17880
tatcttagcc atcattttgc cagcgaggaa acggcacacg tgggtgtaggg gcaactgcca 17940
aggtcacaaat gctttgctct gacatctgct aacaactgca acacagatga ggcaagatgc 18000
gttttccaga gatgggatag gaggctgagt tcatagggac attccctcta gagcccaaca 18060
ttaattcaca tcgtgctttg ggcagaccag gcaaagaggc aatgaagaca tctctgtgtc 18120
cctgctttgt gactgggaaa aagttagaag tccctgtagc atctcctggt ccctaaaacc 18180
cctcaatgct ggagcctctg tgcattggct ggggaggcca gaacctggct gtggccggag 18240
aagccttgcgt gtccacagct cctcctgat tgcccacgag ggtgcttcac tttctcctct 18300
tggtcttctc ggggaccgcg gatcactgcc ttcaaggcca tgaagtgtg gggtagctag gaacatgccg 18420
cctcttgggc tgtgccgcct ccactggcat ctgaagtgtg gggtagctag gaacatgccg 18480
tggtgcccgt ctccctcatt ccatacactt cttgagtggg tgcacttgct gaagcctcag 18540
ttatctgtga ggaattctgag ctccagaccg acagaatctc tctgtactct tagtaaagt 18600
gtctactgca acacacgcat ggttccaggc tctgggacca ccccccgcc ctgcacaggc 18660
ccctcaaata gcaactcggt taaggagtga cagagcaat cggtagaagc tgaaacccgg 18720
agccattcga gatctccctc tctgcctctc tatttctaga attcagcccc tcagccttcc 18780
cagtgcctgt gactccgtgg tggctctcac ttcttagtcc ctggactgtt gacgctgttc 18840
ttccagctgg tctccaaagc aacctgtgct ttctccatat gcctgccaga gtgctaaaaa 18900
cacgtctgtc attcctttgt tgtcacctgt gaaaaacttt tatttatttg agacaggggtc 18960
tctctctctc tctctcgtcc aggcctggagt tcagtgggtc aatctagatg gtcactacac 19020
tcagggagtt ggggatggct cagagctggt aacagagagg ggactgcca ggaggacctg 19080
cgtgaggggt ggggggtggga tgacaaggaa ccagctctgg gagttgaaag acctggattc 19140
aagtctcaac ccaagccctg gccagctctg ggaccccgga caagtcggcc tcaactctctg 19200
cccctcagtg ggtcctctgt tagatgggga taatgatggc tttatatcct gagaatgtgg 19260
ggaggggatt aagtggccaa aatacctgag agtgcgact cagtgcctgg ctcagcaaat 19320
gccctgttc cctccttccc tctccccaga accctcctc ccttcttct tctttttttt 19380
tttttttttt tgaccagag tcttgctatg ttgccaggc tggagtgcag tggcacaatc 19440
tcggctcact gcaacctcca cctcctggct tcaggcaatt cttgtgcctc agcctctcga 19500
gtagctggga ttacaggcag gcaaccatcac gccgggctaa tttttttttt ttttttttgt 19560
agtagaaatg ggatttccacc atattggcag gatgttctcg atctcctgac ctcaggtgat 19620
ccactgcctc tggcctccca aagtgtctgg attataggtg tcagccactg cgcccagccc 19680
ccattgttta tctcctcttc catttcttgt ggggactttt aaaggaaaaa tcaggttggt 19736
gggctggggg agggcatagc tgagaccacc ttgagggcac caagctcact gaccac

```

<210> 4

<211> 379

<212> PRT

<213> Homo sapiens

<400> 4

```

Met Ala Trp Arg Gly Trp Ala Gln Arg Gly Trp Gly Cys Gly Gln Ala
 1          5          10          15
Trp Gly Ala Ser Val Gly Gly Arg Ser Cys Glu Glu Leu Thr Ala Val
 20          25          30
Leu Thr Pro Pro Gln Leu Leu Gly Arg Arg Phe Asn Phe Phe Ile Gln
 35          40          45
Gln Lys Cys Gly Phe Arg Lys Ala Pro Arg Lys Val Glu Pro Arg Arg
 50          55          60
Ser Asp Pro Gly Thr Ser Gly Glu Ala Tyr Lys Arg Ser Ala Leu Ile
 65          70          75          80
Pro Pro Val Glu Glu Thr Val Phe Tyr Pro Ser Pro Tyr Pro Ile Arg
 85          90          95
Ser Leu Ile Lys Pro Leu Phe Phe Thr Val Gly Phe Thr Gly Cys Ala
100          105          110

```



